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*December 3d.*

DR. MORTON, President, in the Chair.

A communication was read from the Minister of Public Works of France, dated Paris, Sept. 5th, 1850, accompanying a number of Vols. of the "Journal des Mines," and of the "Annales des Mines," which had been deficient in the series of that Work in the Library of the Academy ;—and also asking in return, certain numbers of the Journal and Proceedings of this Institution.

A letter was read from Professor Nillson of Sweden, dated Lund, Sept. 30th, 1850, returning acknowledgments for his election as a Correspondent of the Academy, and stating his intention to present a copy of his work on the Fauna of Scandinavian Vertebrata ; and also offering to procure for the Academy, Zoological specimens of that country, if desirable. Referred to the Zoological Committee.

Dr. Leidy read a paper entitled "New genera of Vermes," which, being intended for publication in the Proceedings, was referred to Drs. Zantzing, B. H. Coates and Hallowell.

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*December 10th.*

Vice-President BRIDGES, in the Chair.

Dr. Leidy exhibited several molar teeth and fragments of maxillæ of a fossil Rhinoceros, from Missouri territory, received from the Smithsonian Institution through Prof. Baird, which indicate a species little more than half the size of the recent *R. indicus*. He characterized it under the name of *R. occidentalis*.

Dr. Leidy also exhibited drawings, and offered the following remarks on the netting organs of the Hydra :—

There are three different forms of these organs. The first are of comparatively large size, and are pyriform in shape, measuring about 1-1700ths in. in length, by 1-2125ths in. in breadth. They are found principally upon the arms, and anterior two thirds of the surface of the body, although they are found upon the posterior third also, but few in number. Colorless and transparent, they contain within them an elongated pyramidal body about 1-3400ths in. in length, the apex of which is in contact with, or slightly protrudes from, the projecting extremity of the netting cell ; the base is divided into four lobes and rests upon a prolute spheroid body which has its other extremity applied to the middle of the concavity of a cup-shaped mass of faintly yellowish matter occupying the inferior third or bas-fond of the receptacle. The pyramidal body is described by Corda\* as being a calcareous dart capable of protrusion from the cell, but incorrectly, for when it is forced from its receptacle, it divides into four spine-like processes, which project outward nearly at right angles to the extruded mass. The intervals unoccupied, and the bodies just described within the cell are filled

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\*Nov. Act. Phys. Med. 1836, p. 301.

with a transparent colorless fluid. When the Hydra brings its arms in contact with its prey, the projecting ends of those netting cells which touch it appear to adhere to the captured animal, and in the struggles of the latter, a delicate thread from the netting cell is observed to be attached to the prey which is lengthened in the movements of the latter, entangling its limbs; and if the struggling continues or the prisoner escapes, it will be found to have several of the netting cells, torn from the Hydra, adhering by the long delicate threads. In the detachment of the netting cells, after considerable elongation of the thread, the whole of the interior mechanism is first withdrawn from the cell and adheres to its projecting end, as a cylindrical mass, faintly outlined, with a pyramidal summit from which proceeds the thread, and from the upper third of its sides, rise outwardly like springs, nearly at right angles to it, the four spinous processes before mentioned. The netting cell itself, appears darkly outlined from the thickness of its wall, and is much narrower than in the ordinary condition from the loss of a considerable part of its contents, and within is nothing else but a clear fluid. The traction continuing, the whole cell and appurtenances become detached from the Hydra. The thread which originated in the interior of the cell appears to be of a viscid character, for if any of these cells of the arms of the Hydra come in contact with its own body, they adhere with such tenacity, that the former can only be detached, at the expense of the loss of several of the netting cells. From the detached cells often being found attached to the Hydra itself by the long threads, some observers, as Ehrenberg,\* have considered that they were organs, which the animal threw out from itself like anchors.

The second form of netting organs, are found arranged in more or less regular circles around the first or largest form, usually nine to fourteen in a circle. They are transparent, pyriform, about 1-3400th in. in length by 1-5666th in. in breadth, and have projecting from the prominent extremity a cilium about 1-875th in. in length. These cells are described by Corda as containing a thick walled sac, adhering to the outer cell at the base of the cilium. According to my observations, the appearance of an inner sac arises from a contained thread which forms a double spiral, one end of which forms the cilium projecting from the netting cell.

The third form of netting organs, are found in greatest abundance about the head of the animal, but also exist upon the arms, particularly at the lower part, and upon the surface of the body generally. This form appears never to have been before noticed. They are oblong, transparent cells, about 1-2125th in. long by 1-5666th in. broad, and contain within them a spiral thread, more delicate than in the second form of cells, and have a greater number of turns which take a direction transversely to the length of the cell. They resemble very much in their appearance one of the forms of netting cells of *Corynactis*, figured by Allman in the 17th vol. of the *Annals of Natural History*, Pl. 11, fig. 4. I have never been able to see the threads prolonged externally, on account of their minuteness, in contact with the prey of the Hydra; but by pressure and the continued endosmosis of water I have detected them protruded in this as well as the second form described.

All the forms of netting organs are placed within especial organic cells, adher-

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\*See Arch. für Naturgesch. 1842, p. 71.

ing by the more prominent extremity of the organ to that part of the interior parietes of the cell, corresponding to the free surface of the animal upon which they are placed. Their developement is special from the granular contents of the organic cells and not from the nucleus, for in the first or largest form of netting organs, in their developement upon a bud of the Hydra, I have been able to detect one within an organic cell, and a nucleolated nucleus at its side.

The foregoing observations have been made in frequent efforts to detect some form of cell within the head of the Hydra which would be different from the general structure of the body, and probably characterize a nervous system, but although I have examined the animal in different menstrua under a variety of circumstances, I have never been able to discover anything which could be referred to a nervous structure.

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December 17th.

Dr. MORTON, President, in the Chair.

A communication was read from the American Philosophical Society, dated Dec. 7th, 1850, acknowledging the reception of Part 1, Vol. 2, of the Journal of the Academy.

A communication was read from Dr. T. C. Henry, dated Albany, Dec. 2d, 1850, in reference to two fishes from Oswego Lake, lately presented by him to the Academy, and describing one of them as a new species under the name of *Centrarchus Oswego*. On motion, the communication was referred to a committee consisting of Mr. Cassin, Dr. Fisher and Dr. Leidy.

Dr. Leidy presented for the inspection of the members, fragments of fossil mammalian remains, from Missouri Territory, received from the Smithsonian Institution, through Prof. Baird, consisting of portions of crania, maxillæ and teeth, which he characterized under the names of *Rhinoceros nebraskensis*—a species not much larger than a common hog,—*Palæotherium Bairdii*, *Merycoidodon Culbertsonii*, and *Agriochærus antiquus*.

1. RHINOCEROS NEBRASKENSIS.—A species founded upon a great portion of the face, containing all the superior molar teeth; an inferior maxilla with six molars; and three superior, apparently deciduous molars. It is about the same size as the *R. minutus* of Cuvier.

Length of line of seven superior molars,	. . . .	4 7-10 inches.
“ “ six inferior “	. . . .	4 2-10 “
Breadth of jaws from the first superior true molar teeth of one		
side to the other, . . . . .		3 8-10 “

2. AGRIOCHÆRUS, *n. g.*—Founded upon a great portion of the face and inferior maxilla, containing six molar teeth on each side, and the posterior two molars of both sides superiorly of another individual. The posterior molars of this genus resemble in general form those of *Merycopotamus*, *Falk.*, & *Caut.*, and are about one-third smaller, but the outer demicones are not separated to the base from each other like the former, but are combined by a rounded column as in *Hypotamus bovinus*.